estes aerospace CLUB Membership Kit

Join today... and become a member of the most exciting Rocket Club on Earth!

This Official EAC Membership Kit includes:

- VIPER ROCKET
- MEMBERSHIP CERTIFICATE
- DECAL SHEET
- CLUB EMBLEM
- EAC STATIONERY
- RANGE BOX STICKERS
- MODEL ROCKETRY TECHNICAL MANUAL
- COPY OF MODEL ROCKET NEWS
- THRUST BAR ACHIEVEMENT PROGRAM

RECEIVE ALL THIS...WHEN YOU JOIN THE ESTES AEROSPACE CLUB!

ESTES®

A SUBSIDIARY OF DAMON

This is a hobby kit requiring assembly. Engines, launch system, glue and finishing supplies are not included. Recommended for ages 10 to adult. Adult supervision is suggested for those under 12 years of age when flying model rockets.

ESTES®

A SUBSIDIARY OF DAMON

estes aerospace CLUB

Membership Kit

Join Today!

1447

This EAC Membership Kit Features:

VIPER ROCKET

Special kit designed exclusively for members of the EAC. Features sleek styling, parachute recovery and Mini-Brute power for maximum high performance.

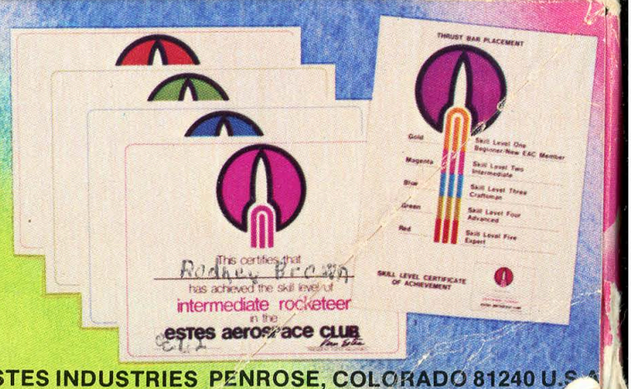
Recommended Engines:
1/2 A3-2T (First Flight) A3-4T, A10-3T

MEMBERSHIP CERTIFICATE

Handsome membership certificate suitable for framing.

YOU'LL DISCOVER MEMBERSHIP IN THE ESTES AEROSPACE CLUB OPENS UP A WHOLE NEW WORLD OF MODEL ROCKET ACTIVITIES.

EAC THRUST BAR ACHIEVEMENT PROGRAM. As an official club member, you will be eligible to participate in this special model rocketry Skill Level Achievement Program. As you advance your model rocketry skills by building additional kits and participating in special projects, you will be presented with additional iron-on thrust bars for your club insignia, plus special achievement certificates, suitable for framing, designating your skill level advancement. This exciting program allows a rocketeer to advance all the way to Skill Level 5, earning him the title of "EXPERT ROCKETEER".



ESTES INDUSTRIES PENROSE, COLORADO 81240 U.S

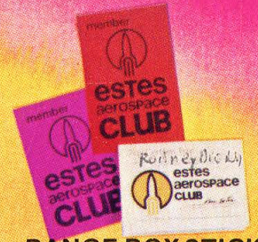
YOUR EAC MEMBERSHIP KIT INCLUDES ALL THIS:

CLUB EMBLEM

Official iron-on patch with EAC insignia for T-shirt or jacket. And as you progress to higher skill levels, you'll receive additional iron-on "thrust bars" signifying your achievements.

DECAL SHEET

Special EAC rocket decals to identify your models as part of the EAC fleet.



RANGE BOX STICKERS AND MEMBERSHIP CARD

Bright, multi-purpose stick-ons for your range equipment, plus Official Club I.D. card.

EAC STATIONERY

Distinctive rocketeer stationery for your most important notes and letters.

MODEL ROCKETRY TECHNICAL MANUAL

Information on construction techniques, finishing, stability, tracking, recovery systems, multi-staging and boost gliders, plus many other interesting subjects.

COPY OF MODEL ROCKET NEWS

Features free plan designs, technical articles, cartoons, contests, construction hints, rocketeer contributions, special projects and much, much more

Join More Than 85,000 Estes Rocketeers Getting The Most Out Of Model Rocketry

BECOME A MEMBER OF THE

estes aerospace CLUB TODAY!

SAVE 50¢ Special EAC Membership ONLY $2.50 See Special Savings Coupon Below!

You'll discover membership in the Estes Aerospace Club opens up a whole new world of model rocket activities. Membership is permanent, and your membership kit includes:

*VIPER ROCKET – Club's Exclusive High Performance Design.

*MEMBERSHIP CERTIFICATE – Suitable for Framing.

*CLUB EMBLEM – Official iron-on patch. As you progress to higher skill levels, you receive additional iron-on "thrust" bars.

*DECAL SHEET – Identify your rockets as part of the EAC fleet!

*RANGE BOX STICKERS – Multipurpose stick-ons for your range equipment.

*EAC STATIONERY – Distinctive stationery for notes and letters.

*MODEL ROCKETRY TECHNICAL MANUAL – Includes information on construction techniques, finishing, stability, tracking, recovery systems, multi-staging, and boost gliders, plus much, much more.

*COPY OF MODEL ROCKET NEWS – Features free plan designs, technical articles, contests, rocketeer contributions and more.

*EAC PRODUCTS BULLETIN – Outstanding offers for EAC kits and products available ONLY to members.

(Shipping wt. 9 oz.)

JOIN NOW! BECOME AN ESTES AEROSPACE CLUB ROCKETEER TODAY!!

Simply Check the EAC box on your order form and include your payment.

Regular EAC Membership (#1447) ..... ~~$3.80~~

Special EAC Membership Offer .....ONLY $2.50

Be sure to include Special Savings Coupons with your order form.

ESTES **SAVINGS COUPON**

WORTH 50¢

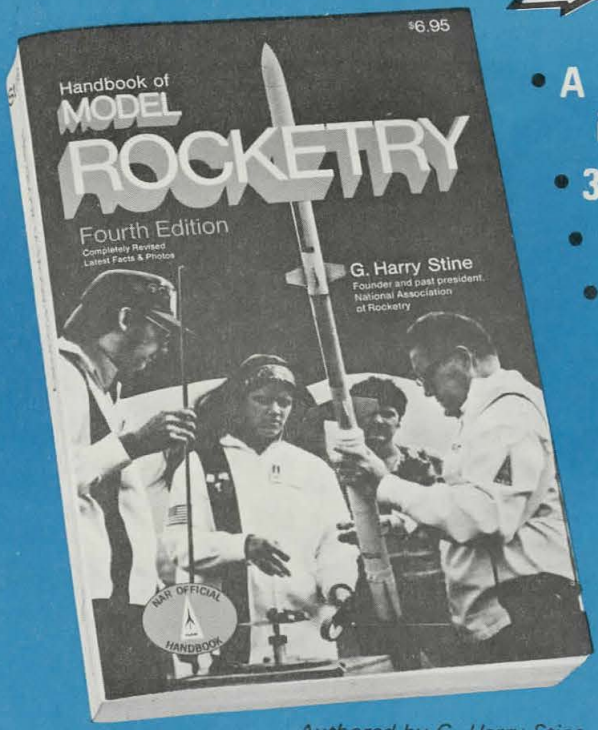
Toward the purchase of the Handbook of Model Rocketry (#2804)

Expires 6-1-'78

COMPLETE! . . . COMPREHENSIVE! . . .
FULLY-ILLUSTRATED!

Handbook of MODEL ROCKETRY

SAVE 50¢
See Reverse Side
For Special
Savings Coupon!



- A Technology in Miniature!
- 352 Pages
- 101 Photographs
- Sturdy Paper Binding
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- Dozens of Charts & Tables
- 111 Drawings & Schematics

Shipping wt. 1 lb. 4 oz.

Cat. No. 2804

Reg. ~~$6.95~~

Now Only

Authored by G. Harry Stine

Here is the one guide to the miniature technology of model rocketry that every rocketeer should have on his shelf. With over 200 illustrations, charts, tables, design criteria, range techniques, multi-staging, tracking systems and so much more.

Whether you are new to the art and science seasoned expert who is creating his own exot sophisticated payloads, this HANDBOOK O brings you an incredible treasury of informatic pedia – fully indexed so you can look things you can actually sit down and read it with p formulae . . . ignition and launching schema pressure and gravity tables – everything you and be successful as a model rocketeer.

(Fourth Big Edition – completely revised with

BLAST·OFF!!

Join the ESTES aerospace CLUB and become a member of the most exciting rocket club on earth.

Membership includes Viper rocket kit, ID card, membership certificate, iron-on emblem, decal sheet, range box stickers, EAC stationary, Technical Manual, subscription to Model Rocket News, EAC Product Bulletin, and a variety of exclusive club services.

Lift-off For Fun! Join Today!!

Check the appropriate space on your Rocketeer Registration/Catalog Request coupon for a free membership brochure and application.

ATTENTION ESTES ROCKETEERS

Would you like to do your teacher a favor (and do a good turn for yourself at the same time)? Send us your science teacher's name and address, and we'll send him a free catalog and a teacher's guide. This guide explains ways in which model rocketry can make the science class more fun. It shows your teacher how to provide exciting "space missions" in which you and your friends learn how the big rockets operate while you are building and launching your own model rockets. Simply include your teacher's name and school address, and your own name and address on the back of this coupon. Mail it today!

REGISTER YOURSELF AS AN OFFICIAL ESTES MODEL ROCKETEER AND RECEIVE A FULL COLOR MODEL ROCKETRY CATALOG!

Register as an official Estes Rocketeer and receive the great new Estes Model Rocketry Catalog. This giant, full color catalog features more than 90 exciting model rocket kits including single and multi-stage vehicles, gliders, scale models, and exotic designs, plus launch equipment, engines, aerial cameras, telemetry devices, and much, much more. Simply fill out the coupon below.

ROCKETEER REGISTRATION/CATALOG REQUEST

☐ Please register me as an official Estes Rocketeer and rush me your newest Estes catalog. I enclose 25c for postage and handling.

☐ Please send me an Estes Aerospace Club membership brochure and application.

☐ I have received an Estes Catalog within the last year.

Name _____ Age _____

Address _____

City _____ State _____ Zip _____

ESTES
A SUBSIDIARY OF DAMON

Send to:
Estes Industries
Dept. 188
Penrose, Colorado 81240

900,073

CUT HERE

EDUCATOR REQUEST

☐ Please send my teacher a free model rocketry catalog and teacher's guide.

Teacher's Name _____

School Address _____

City _____ State _____ Zip _____

My Name _____

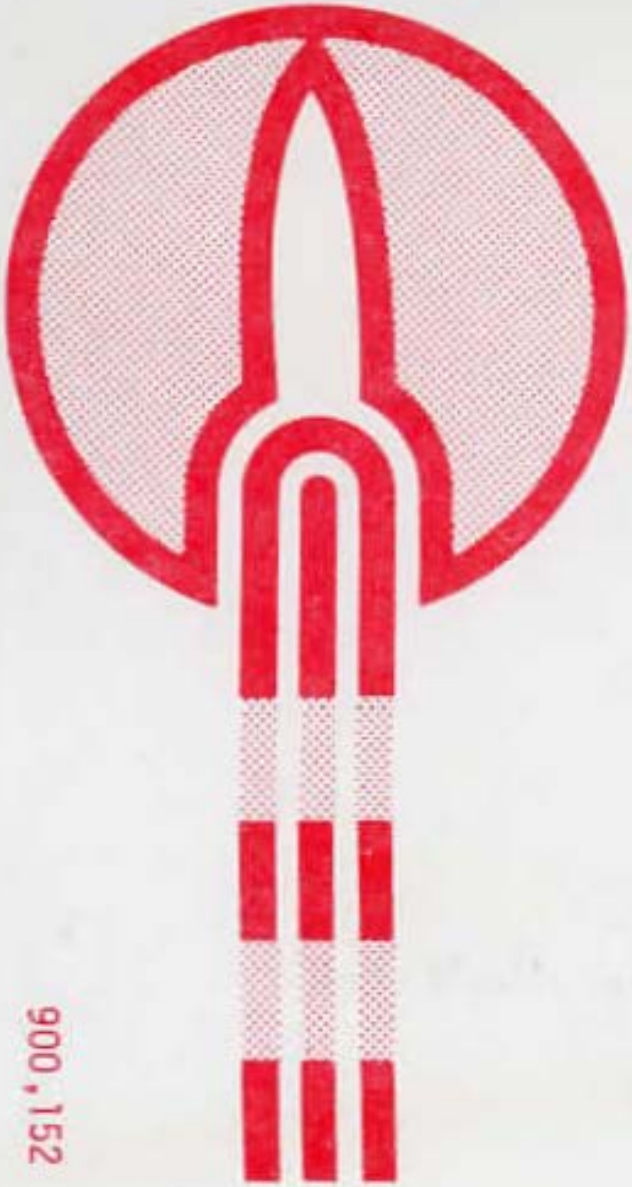
Address _____

City _____ State _____ Zip _____

ESTES
A SUBSIDIARY OF DAMON

Send to:
Estes Industries
Education Department
Department 194
Penrose, Colorado 81240

Estes Aerospace Club



900.152

IMPORTANT!

EAC Iron-On Instructions

EAC INSIGNIA: Set iron for "Low-Cotton," place paper towel under material. Lay coated side of iron-on transfer on T-shirt. Press iron against entire transfer and slowly slide it side to side for 15 or 20 seconds. Be very careful not to move transfer while heating with iron. Peel off paper.

THRUST BARS: Follow instructions above but keep iron still, do not slide against transfer. Be very careful not to place iron directly on an existing iron-on insignia or "thrust bar".

FOR BEST RESULTS USE COTTON FABRICS

This certifies that

Rodney Brown

is an official member
in good standing
in the

ESTES AEROSPACE CLUB

October 27, 1978
DATE

Vern Estes
PRESIDENT, ESTES INDUSTRIES

900,156

Club/Chapter Name _____

President, Estes Industries
Vern Estes

ESTES aerospace CLUB

This Certifies That
Rodney Brown
is an official member of the

EAC ACHIEVEMENT RECORD

DATE	SKILL LEVEL	NO.
10-27-78	■ Beginner/EAC Member	1
_____	☐ Intermediate Rocketeer	2
_____	☐ Craftsman Rocketeer	3
_____	☐ Advanced Rocketeer	4
_____	☐ Expert Rocketeer	5

Special Projects List: _____

EAC Pledge - As an official EAC rocketeer I promise to follow all EAC rules and to carry out all my model Rocket activities in accordance with the Model Rocketry Safety Code.

10-27-78
Date

Rodney Brown
Rocketeer Signature

MODEL ROCKETRY SAFETY CODE

1. **Construction**—My model rockets will be made of lightweight materials such as paper, wood, plastic and rubber, without any metal as structural parts.

2. **Engines**—I will use only pre-loaded factory made rocket engines in the manner recommended by the manufacturer. I will not change in any way nor attempt to reload these engines.

3. **Recovery**—I will always use a recovery system in my model rockets that will return them safely to the ground so that they may be flown again.

4. **Weight Limits**—My model rocket will weigh no more than 453 grams (16 oz.) at liftoff, and the engines will contain no more than 113 grams (4 oz.) of propellant.

5. **Stability**—I will check the stability of my model rockets before their first flight, except when launching models of already proven stability.

6. **Launching System**—The system I use to launch my model rockets must be remotely controlled and electrically operated, and will contain a switch that will return to "off" when released. I will remain at least 10 feet away from any rocket that is being launched.

7. **Launch Safety**—I will not let anyone approach a model rocket on a launcher until I have made sure that either the safety interlock key has been removed or the battery has been disconnected from my launcher.

8. **Flying Conditions**—I will not launch my model rocket in high winds, near buildings, power lines, tall trees, low flying aircraft, or under any conditions which might be dangerous to people or property.

9. **Launch Area**—My model rockets will always be launched from a cleared area, free of any easy to burn materials, and I will only use non-flammable recovery wadding in my rockets.

10. **Jet Deflector**—My launcher will have a jet deflector device to prevent the engine exhaust from hitting the ground directly.

11. **Launch Rod**—To prevent accidental eye injury I will always place the launcher so the end of the rod is above eye level or cap the end of the rod with my hand when approaching it. I will never place my head or body over the launching rod. When my launcher is not in use I will always store it so that the launch rod is **not** in an upright position.

12. **Power Lines**—I will never attempt to recover my rocket from a power line or other dangerous places.

13. **Launch Targets & Angle**—I will not launch rockets so their flight path will carry them against targets on the ground, and will never use an explosive warhead nor a payload that is intended to be flammable. My launching device will always be pointed within 30 degrees of vertical.

14. **Pre-Launch Test**—When conducting research activities with unproven designs or methods, I will, when possible, determine their reliability through pre-launch tests. I will conduct launchings of unproven designs in complete isolation from persons not participating in the actual launching.

This Solid Propellant Model Rocketry Safety Code is Approved by The National Association of Rocketry and the Hobby Industry Association of America

estes aerospace CLUB

Sponsored by Estes Industries, Penrose, Colorado 81240

OFFICIAL INFORMATION SHEET

Dear EAC Rocketeer:

Congratulations on your Estes Aerospace Club (EAC) membership. I know you are going to enjoy the Estes Aerospace Club in every way. You are now a member of the most exciting model rocket club on earth giving you the opportunity to participate in a universe of fantastic model rocket activities.

In addition to all the exciting items in your EAC membership kit, you will also receive a variety of exclusive club services. Skill level achievement program, special product offers, exciting contests, rocket plans, information on special projects, new product information, technical publications, and additional club identification items are just a few of the exciting things which will be available to all EAC members. Plus you will have the opportunity to be selected as a member of the EAC Advisory Board which will suggest new product ideas directly to Estes Industries. Your EAC membership will remain in effect for as long as you remain an active Estes rocketeer.

Please let us know if you have any questions regarding your EAC membership. You will be receiving periodic EAC Bulletins which will provide you with additional club information. Thank you again for joining and may I wish you the very best of luck with all your model rocketry activities.

Sincerely,

Vern

Vern Estes
President
Estes Industries

EAC SKILL LEVEL ACHIEVEMENT PROGRAM

Enclosed with your EAC Membership Kit you will find an attractive club iron-on insignia for your tee-shirt or jacket, identifying you as an official EAC rocketeer. Please note the simulated rocket exhaust or "thrust bars" as we call them near the base of the insignia. As you progress to higher model rocketry skill levels, you will receive additional color coded "thrust bars" which can be added to your club insignia to show your EAC achievement level. See page 4 for correct "thrust bar" placement. In addition to your "thrust bars", you will also receive a special skill level Certificate of Achievement every time you advance.

To advance from one skill level to the next you must fulfill the skill level requirements listed below and show proof of your achievement. As you complete the requirements for each skill level, cut out the names of the rockets you have constructed from the kit panels or boxes, or take photos of your assembled models. Send these directly to Estes Aerospace Club Headquarters together with carbons or photo copies of any required rocket plans or special project information. These items can not be returned. Be sure to include the appropriate skill level coupon on page 3 with your proof of achievement plus 50¢ for handling.

As soon as EAC Headquarters has received your skill level coupon and proof of achievement we will immediately forward you a new, up-rated membership certificate plus color-coded iron-on thrust bars signifying your achievement of a higher skill level. Joining the EAC is just the beginning as you may advance all the way to the status of "Expert" EAC Rocketeer.

As an "expert" rocketeer you will be capable of carrying out a variety of sophisticated model rocketry activities and will be provided with many suggestions for advanced model rocketry research by the EAC.

SKILL LEVEL REQUIREMENTS

*SKILL LEVELS			
Number	Color of Thrust Bars	Name	**SKILL LEVEL REQUIREMENTS
One	EAC Insignia with Gold thrust bars	Beginner or New EAC member	Rocketeers are automatically placed at this level upon joining the EAC.
Two	Magenta	Intermediate	Assemble and fly 3 Estes model rocket kits. At least 2 must be Skill Level Two.
Three	Blue	Craftsman	Assemble and fly 4 additional Estes kits. At least 3 must be Skill Level Three. Be sure one is a multi-stage rocket.
Four	Green	Advanced	Assemble and fly 5 additional Estes Kits. At least 3 must be Skill Level Four. Be sure one is a boost-glider. Plus you must create plans for a stable rocket of your own design.
Five	Red	Expert	Assemble and fly 6 additional Estes kits. At least 2 must be Skill Level Five. Also, you must carry out a special project in aerial photography (Camroc or Cineroc), telemetry (Transroc) or other challenging area. (For guidelines on how to carry out a special project write EAC Headquarters.)

*NOTE: To determine which Estes Model Rocket Kits fall into each Skill Level catagory, consult your Estes Catalog. In older editions, the Skill Levels will be referred to as "degrees of challenge".

**Important: All requirements for a particular Skill Level must be fulfilled before receiving "thrust bars" or Certificate of Achievement for that Skill Level. After being assembled and flown all required Estes kits must also be recovered successfully in order to meet skill level requirements.

EAC SKILL LEVEL TWO COUPON

I would like to request "thrust bars" and Certificate of Achievement for SKILL LEVEL TWO.
I have fulfilled all requirements and would like to become an Intermediate EAC Rocketeer.

NAME _____

ADDRESS _____ PHONE _____

CITY _____

STATE _____ ZIP _____

Important: Be sure to include your proof of achievement plus **50¢** for handling. (Tape coins to back of coupon.)

Names of assembled rockets

(1) (Skill Level Two) Cobra 1500

(2) (Skill Level Two) X-Wing Fighter

(3) Rogue

SEND TO: EAC Headquarters, c/o Estes Industries, Penrose, Colorado 81240.

DETACH HERE

EAC SKILL LEVEL THREE COUPON

I would like to request "thrust bars" and Certificate of Achievement for SKILL LEVEL THREE.
I have fulfilled all requirements and would like to become a Craftsman EAC Rocketeer.

NAME _____

ADDRESS _____ PHONE _____

CITY _____

STATE _____ ZIP _____

Important: Be sure to include your proof of achievement plus **50¢** for handling. (Tape coins to back of coupon.)

Names of assembled rockets

(1) (Skill Level Three) Star Blazer

(2) (Skill Level Three) Sprint

(3) (Skill Level Three) _____

(4) Viper Vigilante

SEND TO: EAC Headquarters, c/o Estes Industries, Penrose, Colorado 81240.

DETACH HERE

EAC SKILL LEVEL FOUR COUPON

I would like to request "thrust bars" and Certificate of Achievement for SKILL LEVEL FOUR.
I have fulfilled all requirements and would like to become an Advanced EAC Rocketeer.

NAME _____

ADDRESS _____ PHONE _____

CITY _____

STATE _____ ZIP _____

Important: Be sure to include your proof of achievement plus **50¢** for handling. (Tape coins to back of coupon.)

Names of assembled rockets

(1) (Skill Level Four) _____

(2) (Skill Level Four) _____

(3) (Skill Level Four) _____

(4) Viper

(5) _____

Name of Rocket Plan enclosed _____

SEND TO: EAC Headquarters, c/o Estes Industries, Penrose, Colorado 81240

DETACH HERE

EAC SKILL LEVEL FIVE COUPON

I would like to request "thrust bars" and Certificate of Achievement for SKILL LEVEL FIVE.
I have fulfilled all requirements and would like to become an Expert EAC Rocketeer.

NAME _____

ADDRESS _____ PHONE _____

CITY _____

STATE _____ ZIP _____

Important: Be sure to include your proof of achievement plus **50¢** for handling. (Tape coins to back of coupon.)

Names of assembled rockets

(1) (Skill Level Five) _____

(2) (Skill Level Five) _____

(3) _____

(4) _____

(5) _____

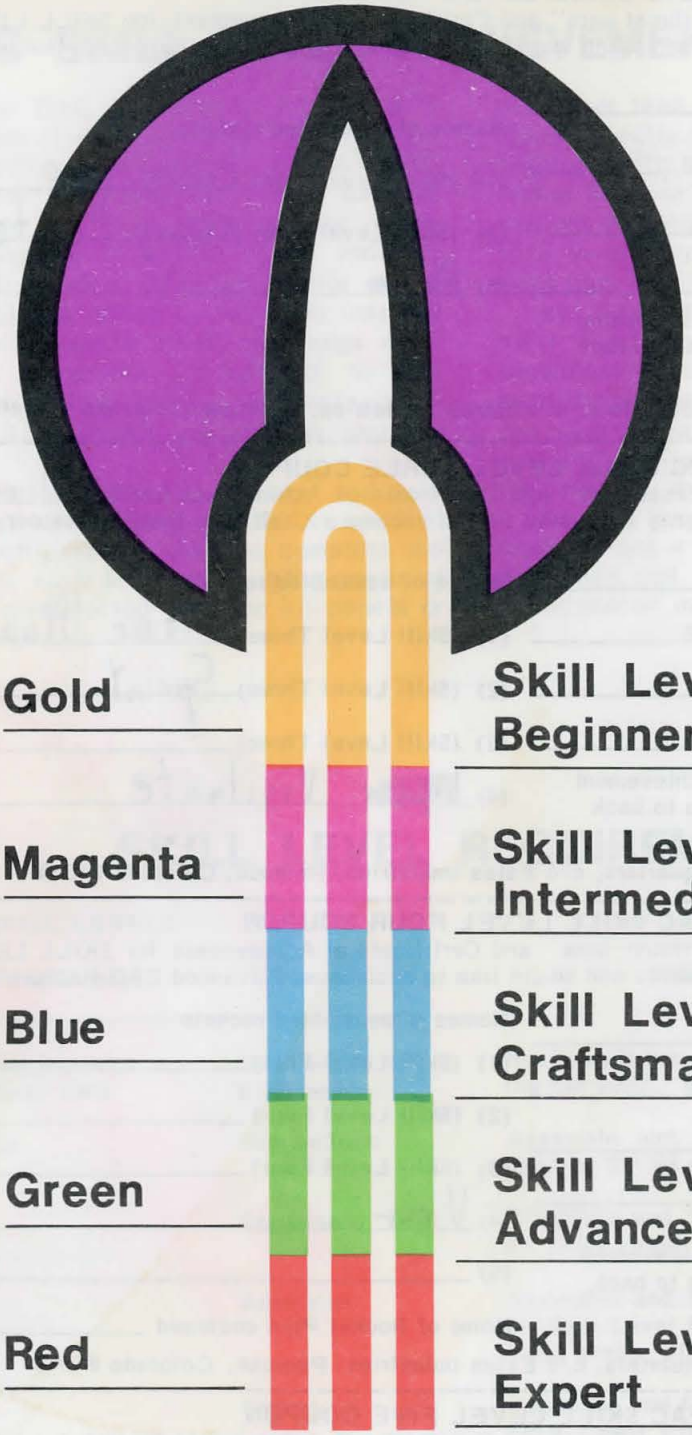
(6) _____

Name . Special Project enclosed _____

SEND TO: EAC Headquarters, c/o Estes Industries, Penrose, Colorado 81240.

900,151

THRUST BAR PLACEMENT

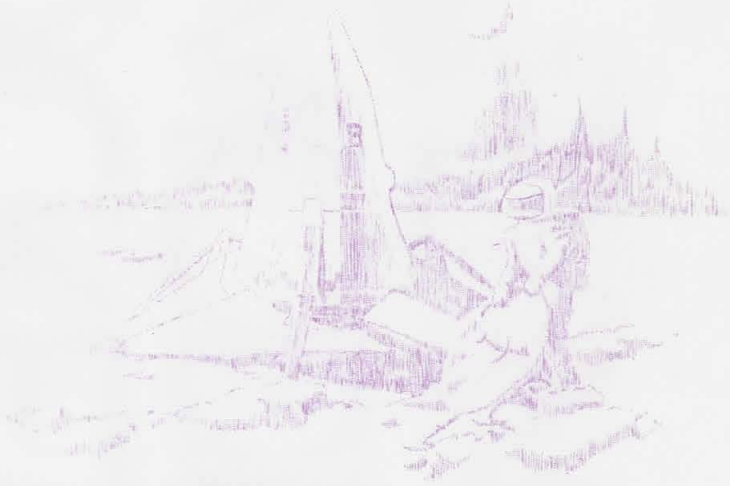


Gold	**Skill Level One** **Beginner/New EAC Member**
Magenta	**Skill Level Two** **Intermediate**
Blue	**Skill Level Three** **Craftsman**
Green	**Skill Level Four** **Advanced**
Red	**Skill Level Five** **Expert**

SKILL LEVEL CERTIFICATE OF ACHIEVEMENT

From the Launch Pad of _____

A Reporting Member of the Estes Aerospace Club



estes aerospace CLUB

SPECTRA

OFFICIAL NEWSLETTER OF THE ESTES AEROSPACE CLUB

Vol. 5 No. 1
WINTER 1979

STAR WARS™

REBEL FORCES ATTACK FIGHTER CONTEST WINNERS!

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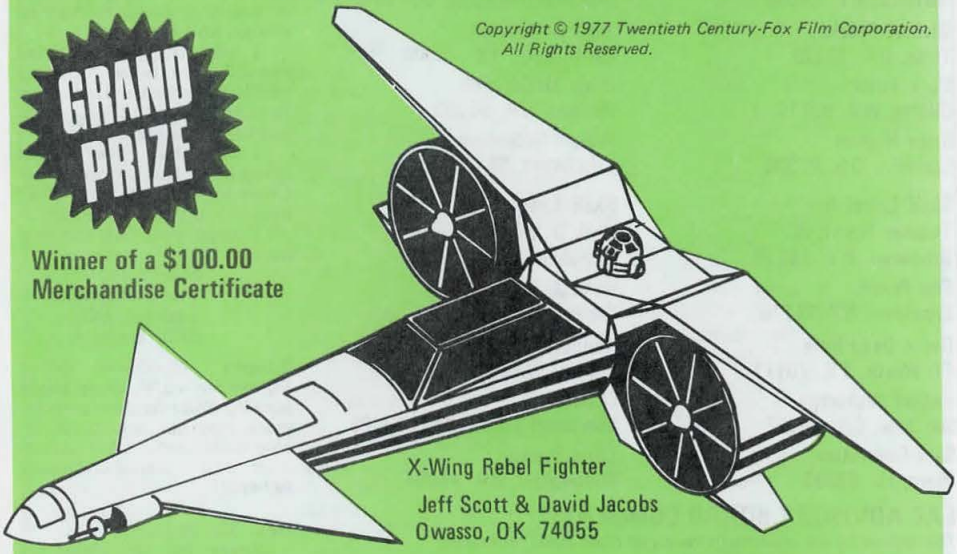
GRAND PRIZE

Winner of a $100.00 Merchandise Certificate

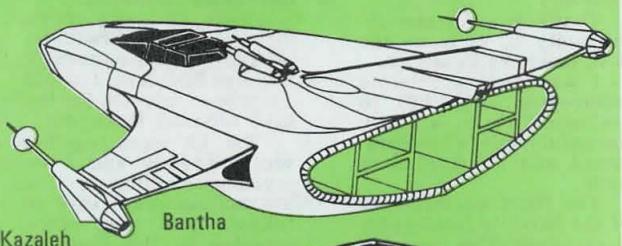


X-Wing Rebel Fighter

Jeff Scott & David Jacobs
Owasso, OK 74055

1st

Winners of $50.00 Merchandise Certificates



Bantha

John Foss & Mike Kazaleh
Livonia, MI 48152

Orion Four-Fighter

Russel Jong
Palo Alto, CA 94306

(More Winners on Pages 4 and 5!)

EAC Advisory Board

With the introduction of each new Estes product a special group of EAC Rocketeers is selected to review it. They are sent a sample of the actual product and are asked to test it and comment directly to Estes engineers. Out eighth group of EAC Advisory Board members, listed below will be evaluating our BATTLESTAR GALACTICA TM Colonial Viper TM and Laser Torpedo TM , plus our "new" Maxi Alpha III, Colossus and Multi-Roc flying models. Suggestions for new product ideas are always welcome from all EAC Rocketeers.

EAC ADIVISORY BOARD NO. 8

Skill Level 2

Andy Key
Alamagordo, NM 88310

Jason Madden
Hartford, CT 06106

Michael Frazier
Tulsa, OK 74129

Mark Tutor
Gilette, WY 82716

Brian Hughes
Corvallis, OR 97330

Skill Level 3

Paul Niedringhaus
Omaha, NE 68144

James O. Turner, III
Charleston Heights, SC 29405

Julie Duderstadt
Carrollton, TX 75006

Hugh McCormick
Renton, WA 98055

Joseph Robertson
Charleston, SC 29405

Skill Level 4

Thomas Payne, Jr.
Brooklyn, NY 11210

Eric Pivnik
Brooklyn, NY 11210

Devin Della-Rose
Ft. Worth, TX 76111

Robert Dickerson
San Jose, CA 95123

Sam Guerrattaz
Flora, IL 62839

Skill Level 5

Mark D. Nibbe
Goodhue, MN 55027

Rand J. Fuller
Capac, MI 48014

Kenneth Wade
Mineral Wells, WV 26150

Chris May
Sherwood Forest, MD 20405

Chris Pearson
Willoughby, OH 44094

EAC ADVISORY BOARD COMMENTS

The following are comments received from EAC rocketeers for Advisory Boards #6 and #7.

Dear Sirs:

Thank you for the opportunity to serve on the EAC Advisory Board #6.

I was given a Satellite Interceptor (#1296) to evaluate. This kit is a very beautiful model when completed and is very fun to build.

The flight performance of the Satellite Interceptor is excellent. The model is very stable in flight and achieves very good altitude with all engines recommended for it.

Again thank you for this opportunity.

Sincerely,
David Bollinger
Russellville, AR
Skill Level 5

Dear Estes Industries:

Thank you very much for the Black Brant III (#1293). I was extremely honored and pleased to find I had been selected for the EAC Advisory Board #6.

The kit went together very smoothly and I enjoyed assembling it. The instructions were easy to follow and they corresponded to the drawings perfectly. . . . Overall it was great to put together!

Also it flies wonderfully high and straight. It was one of the best models I've ever built.

Thanks again,
Ken Tanaka
Denver, CO
Skill Level 3

Dear Sirs:

Thank you for choosing me as a member of your Advisory Board #7 and for the X-Wing Fighter, (#1298).

I have built and flown the X-Wing and I think it is really a good rocket in design and looks. . .

I also think that Estes should give Solar Igniters (#2301) instead of Astron Igniters (#2225) with packs of engines.

I wish that Estes would bring back the Camroc and Cineroc because I am anxious to try them both. . .

I hope you can use my ideas!

Sincerely,
Todd Hayden
Ladson, SC
Skill Level 4

Editor's Comment: As of September 1978, Estes began packing Solar Igniters with engines. Plus our new 1979 catalog features the "new" Astro-Cam 110 Aerial Camera (#1410)!

Dear Mr. Boles:

Sorry for the delay in answering, but your kit arrived while I was on vacation.

Due to early snowfall I did not have a chance to test fly the X-Wing Maxi-brute (#1302), but after calculating the center of gravity, I am sure it will perform perfectly.

The model built well and the instructions are very clear. The detailing is great!

I am sure anyone who purchases this kit will be greatly impressed whether he is a Star Wars freak or not!

Thank you for selecting me for the EAC Advisory Board #7 and I hope I have been of assistance to you.

Gordon Meyer
Roy, UT
Skill Level 5

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CONGRATULATIONS ESTES AEROSPACE CLUB MEMBERS!

SKILL LEVEL ACHIEVEMENT ROLL

In recognition of their model rocketry accomplishments we have listed the names of EAC members who have achieved our highest and second highest skill levels since the publication of our last EAC Spectra Newsletter. Congratulations to these Skill Level 4 Advanced Rocketeers and Skill Level 5 Expert Rocketeers. Unfortunately, space requirements will not permit us to continue listing the achievement roll for all EAC members in each issue of Spectra. For information on skill level advancement write: EAC Headquarters, c/o Estes Industries, Penrose, CO 81240.

EXPERT ROCKETEER SKILL LEVEL 5

Richard E. Arnold, Jr.
Largo, FL 33540

Rick Berg
Encinitas, CA 92024

Scott Butzke
Mesa, AZ 85203

Peter Byrnes
Victoria, BC, Canada V8N 3Z4

Pete Cary
Campbell, CA 95008

Louie Casale
Stratford, CT 06497

Jerry Cimaroli
Chicago Heights, IL 60411

Jeff Comer
Barboursville, WV 25504

Bobby Cotton
St. Petersburg, FL 33703

Patrick Dashnaw
Hudson Falls, NY 12839

Scott Davis
Woodburn, IA 50275

John Deters
Rogers, MN 55374

Jeff Dobberpuhl
Aberdeen, SD 57401

Joey Dunnagan
Winston-Salem, NC 27105

Rand J. Fuller
Capac, MI 48014

Allan Gladstone
Denver, CO 80210

Steve Gomon
Lodi, WI 53555

Kenneth Grantham
Crawfordville, FL 32327

Mark Grebe
York, NE 68467

Brad Hankin
Poughkeepsie, NY 12603

Dave Leslie
Regina, SK, Canada

Chris May
Sherwood Forest, MD 20405

Michael McDowell
Millville, NJ 08332

David McGraw
Akron, OH 44312

Bryan McKane
Hollywood, FL 33023

Richard Meredith
Jackson, GA 30233

Douglas L. Miles
Urbandale, IA 50322

James Nelson
Decatur, MI 49045

Jeff Nelson
Decatur, MI 49045

Mark D. Nibbe
Goodhue, MN 55027

Christopher T. Pearson
Willoughby, OH 44094

Bryan Peterson
Portland, OR 97225

Aldo Ray Powell
Quincy, FL 32351

Ron Prieston
Calgary, AB, Canada T2K 4H4

Alexander Pucciariello
Roscoe, NY 12776

Stephen Rapiejko
Ronkonkoma, NY 11779

David Reid
Urbandale, IA 50322

John Schmid
Arlington Heights, IL 60004

Michael L. Schwartz
Largo, FL 33540

Jay Siart
Mystic, CT 06355

Danny Taylor
Cabool, MO 65689

Warren Tooman
Anadarko, OK 73005

Steven Van Genderen
Cabool, MO 65689

Todd Vest
North Star, Newark, DE 19711

Kenneth Wade
Mineral Wells, WV 26150

Bruce Walters
Franklin, PA 16323

ADVANCED ROCKETEER SKILL LEVEL 4

Wade Abell
Marissa, IL 62257

Jerry Amoroli
Chicago Heights, IL 60411

Dean Anderson
Sebastopol, CA 95472

Jeff Angelli
W. Seneca, NY 14224

Pete Arding
Troy, OH 45373

Roger Beaudoin
Holyoke, MA 01040

Rick Behrens
Bishop, CA 93514

Mike Bell
Alden, PA 19018

Robert Benchi
West Bridgwater, MA 02379

Ruth Bensley
Westfield, IL 68474

Tony Bernard
Cartersville, GA 30120

Sam Black
Sylvania, OH 43560

Jim Biegemna
Shakopee, MN 55379

Wayne Boya
Howell, MI 48843

Charles Boysil
Union City, NJ 07087

Don L. Brown
Seattle, WA 98115

Jim Brown
Columbus, KS 66725

Jonathan Brown
Fremont, IN 46737

Danny Burns
Princeton, MN 55371

Kenneth Carel
Kingsley, IA 51028

Bill Casciano
Allentown, PA 18103

Bruce Chroel
Calgary, AB, Canada T2W 1L7

Robert Cocstorye
Fariport, NY 14450

Duncan Connel
Minneapolis, MN 55407

Charles Corcoran
Cuyahoga Falls, OH 44221

Eldon Dales, Jr.
Lebanon, OH 45036

Robert S. Dannecker
Port Crane, NY 13833

Michael Dash
Bethpage, NY 11714

Ken Davis
Cherry Hill, NJ 08003

Mark Davis
Phoenix, AZ 85021

Todd Davis
Jackson, MI 49203

Devin Della-Rose
Ft. Worth, TX 76111

Robert Dempsey
Arlington, VA 22207

Danny Desousa
Bowmanville, ON, Canada

Robert K. Dickerson
San Jose, CA 95123

Paul Dicky
North Tonawanda, NY 14120

James Drake
Mohegan Lake, NY 10547

Mark Drake
Seminole, FL 33542

Paul Drake
Seminole, FL 33542

Benjamin DuBois
Randolph, VT 05060

Richard Dulcey
Beaver Meadows, PA 18216

Davis Duncan
Waco, TX 76710

John Ehrhardt
Torrington, CT 06790

Tom Everson
New Britain, CT 06051

John Falone
Covina, CA 91724

Stanley Flatt
Cookeville, TN 38501

Will Foscher
San Rafael, CA 94901

John J. Frey
Potomac, MD 20854

Michael Gatesman
West Middlesex, PA 16159

Jim Gessner
Upper Black Eddy, PA 18972

Rich Gibbs
Greeley, CO 80631

Mike Givens
Roanoke, VA 24012

(Continued on page 6)

STAR WARS™

REBEL FORCES ATTACK FIGHTER CONTEST WINNERS!

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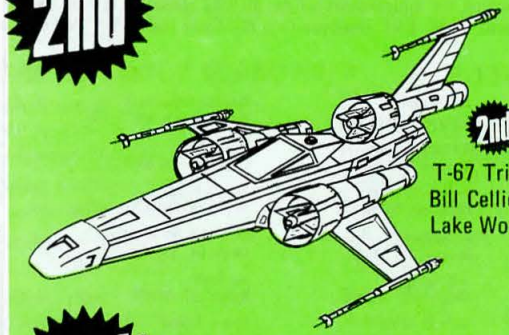
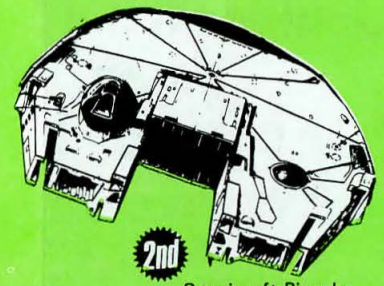
2nd Winners of $25.00 Merchandise Certificates



2nd T-67 TriStar
Bill Cellich
Lake Worth, FL 33461

2nd Magnum 5
Brent Yamasaki
Whittier, CA 90601



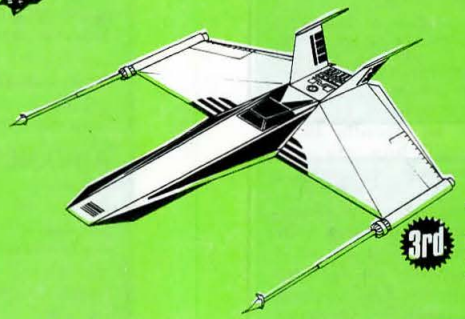
2nd Omnicraft Piranha
Jeffrey Menden
Kenosha, WI 53140

3rd Winners of $10.00 Merchandise Certificates

3rd Incom T-61 K–Wing
Monroe Harden
Colorado Springs, CO 80918

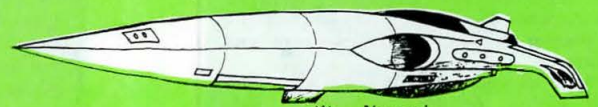
3rd Super Fighter T-7, 000
John Tamburro
South Euclid, OH 44121

3rd Rebel Battleship
Glen Rawding
Boxford, MA 01921

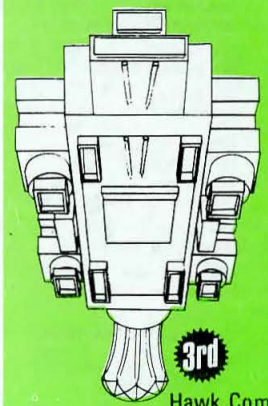


3rd T-16
Mitch Alvillar
Lodi, CA 95240

3rd RX IV
Steve Becker
Alpine, CA 92001



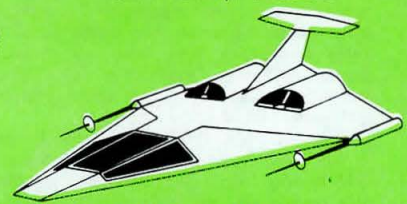
3rd Nomad
Mark Cantrell
Okeechobee, FL 33472



3rd Hawk Commando
Galen Kerber
Colchester, IL 62326

3rd Delta Wing Fighter
Mark Doughty
Alta Loma, CA 91701

3rd T-85 Fighter
Keith Sherwood
Los Alamos, NM 87544



3rd Single Man Rebel Fighter
Warren Crain
Capistrano Beach, CA 92624

4th Winners of a "New" Wizard Kit (#1292)

Christopher Hawks
Barberton, OH 44203

Marc Dematteo
Valyerman, CA 93563

Maynard Hammond
Providence, UT 84332

Ricky Wofford
Leesburg, FL 32748

Dan Heffernato
Wescoseville, PA 18106

Tim Arnold
Beallsville, OH 43716

Richard Lenkowski, Jr.
Middlebury, CT 06762

James Tong
Beaverton, OR 97005

Harold Weed
San Francisco, CA 94122

Gary W. Cooke
Smith Grove, KY 42171

Greg Hawkinson
Davenport, IA 52804

Arthur Nino
Houston, TX 77089

Danny Drexler
Old Bethpage, NY 11804

Dale Greenawalt
Chicorai, PA 16025

Mitch Alvillar
Lodi, CA 95240

Ralph E. Salls
Tampa, FL 33609

Eddie Cox
Washington, NC 27889

Ken Marsh
Baltimore, MD 21236

David A. Gibson
Dunstable, MA 01827

Ken Triplett
Exeland, WI 54835

Melvin Fong
Los Angeles, CA 90023

Trent Carson
Kenosha, WI 53142

Eric Bakke
Lakewood, WI 54138

Dave Gibson
Dunstable, MA 01827

J. L. Warnock
Independence, KS 67301

Karl Siil
Flushing, NY 11358

Patrick Repper
Pahokee, FL 33476

Jeff Muth
Wilmington, DE 45177

Jim Shea
New Holstein, WI 53061

Steve Ellingson
Sidney, NY 13838

David Bowanko
Arlington, VA 22205

Richard Pettibone
New Fairfield, CT 06810

David M. Gubbins
Utica, NY 13501

Charles J. Martini II
Springfield, PA 19064

Steven Miller
Gibsonia, PA 15044

Kenneth Kelley
Ruth, CA 95526

Daniel Solorzano
Panorama City, CA 91402

John Sjogren
New London, MN 56273

Patrick Underwood
Grapeland, TX 75844

Lloyd Leichentritt
Deerfield, IL 60015

Henry W. Cowen, Jr.
Ellington, NY 14732

Richard Anderson
State College, PA 16801

Jim Cunningham
Oak Lawn, IL 60453

Thomas F. Carr
Charlotte, NC 28211

Stephan & Sanford Brown
Poughkeepsie, NY 12603

Paul Strand
White Bear Lake, MN 55110

Larry Fisher
Spring Valley, NY 10977

Bill Durkin
Astoria, OR 97103

Brian Crouch
Long Beach, CA 90805

Robert Webb
Risingsun, OH 43457

SKILL LEVEL ACHIEVEMENT ROLL

(Continued from page 3)

Ronald Dean Goforth
Houston, TX 77062

K. Green
Rockford, IL 61108

Sam Guerrattaz
Flora, IL 62839

Ralph Haddad
New York, NY 10010

Mike Haddock
Briarcliff, NY 10510

Craig Haines
Berryville, VA 22611

Carl Hanson
Cypress, CA 90630

Mike Hardy
Paradise, CA 95969

J. Fred Harmon
Charleston, SC 29405

Mark Haubert
Massillon, OH 44646

Eric Hess
Tarentum, PA 15084

Dave Hettmer
Bloomington, IN 47401

Mike Hilton
Alexandria, LA 71301

Kirk Holzapfel
McMurray, PA 15317

Robert Alan Horney
Hialeah, FL 33012

Geza R. Horvath
Sonora, CA 95370

Jeff Jacobs
West Seneca, NY 14224

Jeff Johnston
Glens Falls, NY 12801

Mark Johnston
Deerfield Beach, FL 33441

Michael Johnston
Rolla, MO 65401

Bob Jones
Florissant, MO 63033

Dennis Jones
Confluence, PA 15424

Greg Jones
Harrisburg, PA 17112

Robert Kates
Brookline, MA 02146

James Keene
Manchester, CT 06040

Marsha Kendrick
Belfry, KY 41514

Edward Kim
Darien, IL 60559

Larry King
Fairbanks, AK 99701

Scott Kjar
Thornton, IA 50479

Bradley Kliewer
St. Joseph, MO 64505

John A. Kozell
Wyckoff, NJ 07481

Bill Kroll
Decatur, GA 30033

Tom Krosowski
Melba, ID 83641

Jim Lammers
Kansas City, MO 64114

Tom Landen, Jr.
South Bend, IN 46635

Leo Lanham
Alton, IL 62002

Patrick Lee
Lakewood, CO 80215

Charles Lehrer
Amherst, MA 01002

Robbie Lessel
Orefield, PA 18069

Paul Letender
Pittsburgh, PA 15227

Karl Littau
Auburn, CA 95603

Rick Little
Paramount, CA 90723

Douglas M. MacMillan
Carpentersville, IL 60110

Steve Madson
Redwood Falls, MN 56283

Paul Maeyaert
Walnut Grove, MN 56180

Keith A. Mapier
Mulvane, KS 67110

Jim Marks
Rockton, IL 61072

Jeff McDowell
Canyon, TX 79015

Jan McMinn
Childress, TX 79201

Bryan McPaul
Hollywood, FL 33023

Monty Michael
Land O Lakes, FL 33539

Nathan Montney
Capac, MI 48014

Frank Moran, Jr.
Portage, IN 46368

Justin Morris
Wayzata, MN 65391

Scott Morris
Millstadt, IL 62260

Dan Mullaney
Clinton, PA 15026

Bruce Oberleitner
Boise, ID 83704

Bob Ornelas
Petersburg, IL 62675

Robert Osborn
Kansas City, MO 64133

Bob Panzer
Ainsworth, NE 69210

Jim Park
Dublin, GA 31021

Scott Parsons
Lakewood, CO 80226

Joseph R. Pass
Windsor, NY 13865

Thomas Payne, Jr.
Brooklyn, NY 11210

Shawn Penning
Belle Fourche, SD 57717

David Pisor
Detroit, MI 58221

Note: Due to space requirements, we are unable to list all who achieved Skill Level 4, however, their names will appear in the next issue.

ATTENTION EAC MEMBER

Now that you are an active rocketeer, we would like to recommend membership in the National Association of Rocketry.

As an NAR member you will be able to compete in offically sanctioned local, state, national, and even international model rocketry meets. Your rockets and designs will become eligible to set national and international records and most important, you will be kept informed of happenings in model rocketry and aerospace around the world.

Also as a NAR member you will receive a monthly copy of Model Rocketeer, a magazine published as a service by the NAR for its members. It contains news of upcoming model rocketry and space events, manufacturers' news, modroc tips, designs and plans, news of the NAR, its members, and other people in the aerospace field. Also, it contains editorials, humor, and rocketry history.

For more information and a membership application write:

NAR Headquarters
Dept. ESI-46
P. O. Box 725
New Providence
NJ 07974

JOIN TODAY!

ATTENTION EAC ROCKETEER

EAC HQ wants you to share your ideas, projects, experiences, and suggestions with your fellow EAC members. Our desire is to make the EAC Newsletter an exciting and valuable publication for EAC rocketeers. Your assistance is needed to make this newsletter the main vehicle for communication between EAC members and chapters.

Send us your contributions for plans, tech articles, cartoons, anecdotes, club news, and other interesting items. If you send us photos, please make sure that you pack them between cardboard sheets so that they won't get creased in the mail. All contributions become the property of the Estes Aerospace Club and cannot be returned. Address all material to: EAC Newsletter Editor, c/o Estes Industries, Penrose, Colorado 81240.

Should your article or photos be used in the EAC Newsletter, we'll reward your efforts and talent with an Estes merchandise certificate, the amount which will be determined by the EAC HQ editorial staff.

Hope to hear from you soon!

TIPS ON MODEL ROCKET DEMONSTRATIONS

by Robert L. Cannon

Want your next model rocket launch to be the best ever? Then read on. Described in this article are a number of proven techniques which should assist you in your next demonstration.

Prepare, prepare, PREPARE! Take care of everything possible in advance. Not only will this prevent problems, it lets you enjoy the demonstration more fully when you know that everything is under control. In addition to having more fun during the launch, you are helping to create a great first impression for the spectators.

Choose reliable people to assist you well in advance of the demonstration. Train them carefully. Help them practice their roles during prelaunches. Every rocket to be launched at the demonstration should be brought to one central location for storage, preferably a day or so before the launch. Each rocket should be checked for safety and flight readiness at this time. This check should include such basic tests as these:

1. All fins should be glued on securely and reasonably straight.
2. Perform the string test for stability on all models not made from standard kits. (For more information on this test see Estes Technical Report TR-1, "Rocket Stability".)
3. Shock cords and mounts should be securely attached. Pull the nose cone off and pull it away from the body tube to test this.
4. Launch lugs must be securely glued in proper position.
5. Nose cones must not fit too tightly. If the nose cone cannot come off readily when the ejection charge functions, the model may go up and come down at very similar velocities --not recommended for any model!
6. Parachutes must be firmly assembled and securely fastened.
7. The owner of each rocket should have his name and telephone number on it as this will aid in retrieving the model.
8. The correct amount of recovery wadding should be properly inserted. However, do not pack the parachute until a few minutes before launch time. Leaving a parachute packed for long periods of time may cause it to stick and possibly not open properly.

Launch systems should also be checked out a day or so before the demonstration. These checks should include the following:

1. Each launch pad and electrical ignition system should be in good shape physically.
2. Micro-clips should be clean and the jaws must meet well.
3. Check all batteries and dry cells.
4. Make sure the electrical system has no shorts, loose connections, broken wires, or broken connections inside the insulation.
5. Align launch rod segments properly.
6. Mount launch rods properly on launch pads and attach securely.
7. Clean and oil blast deflector plates.
8. Use maxi-rods on properly anchored launch pads for launching large D-powered rockets.

Launch Site Tips:

1. Use only those engines recommended for your rocket.
2. Be sure that the igniter is properly inserted and secured. (Most launch problems arise from failure to install the igniter correctly and secure it firmly in place.)
3. Do not use standard igniters with Solar Launch Controllers, as these igniters require more amperage to function properly.
4. The person in charge of the demonstration should have control of the safety key at all times. No one should approach the launch pad when the safety key is inserted in the controller.
5. Keep the micro-clips clean during the launch.
6. Appoint a recovery crew and station them in suitable locations. No one else should be allowed in the recovery area. Recovered rockets should be returned to a central location.
7. Each launch pad should have one person in charge of preparing the next rocket to be launched on that pad.
8. Keep the demonstration moving quickly. To assure this each job must be carried on efficiently.
9. Keep the tip of the launch rod above eye level or capped when not in use.
10. Have a spare launch pad and control system in proper working condition with you for emergencies.

(Continued on page 8)

TIPS ON MODEL ROCKET DEMONSTRATIONS

(Continued from page 7)

11. Make certain if you use a public address system that it is adequate. You may lose the onlookers' interest if they are unable to hear you.
12. Mark off the launch site, recovery and prepping areas, and allow only those people participating in the demonstration to be in these areas.
13. Stock a field emergency box with such items as masking tape, pliers, igniters, engines, and anything else you may need.

Read and know the Model Rocketry Safety Code. REMEMBER, SAFETY FIRST! And have a great demonstration.

This may sound like a great deal to keep up with, and it is. But the few extra minutes it takes are well worth it.

ESTES®

A DAMON COMPANY

RETAILER DEMONSTRATION PROGRAM

ATTENTION EAC MODEL ROCKETRY CLUBS

Estes Industries awards free merchandise to clubs who carry out model rocketry demonstrations for hobby retailers in their area. If your club would like to participate write:

Estes Industries,
Retailer Demonstration Program,
Penrose, CO 81240,
Attention: Mary Roberts

EAC KITBASHING CONTEST

You like the kit you've just purchased, however, you think it will look neater or fly better if you make a little change here or there?

Well, here's your chance to make those changes and win a $50.00 Merchandise Certificate if you are a winner, or a $10.00 Merchandise Certificate if you are one of twenty-five runners-up in the EAC Kitbashing Contest!

WHAT IS KITBASHING??? Kitbashing is taking an existing kit and modifying it for performance or different appearance, using only those parts included in the original manufacturer's kit!

Let your imagination go! You may make any changes you wish on the Estes Interceptor (#1250), Orbital Transport (#1242), or the Andromeda (#1273). Remember though, your kitbashed model must fly.

RULES:

1. You may enter as many times as you like.
2. You may use only those parts included in your kit, either the Interceptor (#1250), the Orbital Transport (#1242), or the Andromeda (#1273).
3. Kits may be modified for increased performance, different appearance, or both.
4. You must include a diagram, or drawing and parts list, and any instructions you feel would be helpful. Photos are not necessary but would be appreciated.
5. All kitbashed designs must be able to fly.
6. All entries become the property of Estes Industries and cannot be returned.
7. Employees of Estes Industries and members of their immediate families are not eligible.
8. Entries will be judged on neatness, completeness, originality, and uniqueness.
9. Deadline for receipt of entries is midnight May 1, 1979.
10. Decision of the judges is final.
11. Mail entries to:
    Estes Industries
    EAC Kitbashing Contest
    Penrose, CO 81240